Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of the claims in the application:

Listing of Claims:

1. (Currently Amended) A method for generating and transmitting bit rate conversion information, the method comprising: receiving a sequence of media signals, the sequence of media signals is to be transmitted over a communication channel; applying at least two bit rate conversion scheme~~s~~ on the sequence of media signals; and analyzing the results of the appliance of the at least two bit rate conversion scheme~~s~~ to provide bit rate conversion information to be sent to multiple controllers that determine whether to apply bit rate conversion techniques in response to bit rate conversion information.

2. (Currently Amended) A method for generating and transmitting bit rate conversion information, the method comprising: receiving a sequence of media signals, the sequence of media signals is to be transmitted over a communication channel; applying at least two bit rate conversion schemes on the sequence of media signals; and analyzing the results of the appliance of the at least two bit rate conversion schemes to provide bit rate conversion information; and ~~The method of claim 1 further comprising a step of~~ transmitting at least a portion of the bit rate conversion information over the communication channel.

3. (Original) The method of claim 2 wherein the step of transmitting at least a portion of the bit rate conversion information is preceded by a step of multiplexing the at least portion of the bit rate conversion information with the sequence of media signals.

4. (Currently Amended) The method of claim ~~1~~2 wherein the bit rate conversion information indicates (a) the at least ~~one~~two bit rate conversion scheme~~s~~ applied on the sequence of media signals, and (b) at least two ~~one~~ amount~~s~~ of bit rate conversion resulting from the appliance of the at least ~~one~~two bit rate conversion scheme~~s~~.

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5.   (Currently Amended) The method of claim 4 wherein the bit rate conversion information further indicates at least one quality loss resulting from the appliance of the at least ~~one~~two bit rate conversion scheme̲s.

6.   (Currently Amended) The method of claim 1 wherein the bit rate conversion schemes are selected from a̲ ~~the~~ group consisting of:

      removing filler packets;

      removing filler frames;

      removing stuffing bits;

      selectively scaling DCT coefficients to zero;

      selectively setting DCT coefficients to zero;

      discarding data used to represent selected media frames;

      discarding data used to represent selected media frames and generating repeat information in the bit stream such that a decoder can repeat the dropped frames;

      re-quantizing quantized DCT coefficients;

      extracting and changing the quantization scale factors;

      decode and encode at different bit rates; and

      changing the resolution of a video image.

7.   (Currently Amended) A method for generating and transmitting bit rate conversion information, the method comprising: receiving a sequence of media signals, the sequence of media signals is to be transmitted over a communication channel; applying at least two bit rate conversion schemes on the sequence of media signals; and analyzing the results of the appliance of the at least two bit rate conversion schemes to provide bit rate conversion information; ~~The method of claim 1~~ wherein the steps of applying and analyzing are repeated to produce bit rate conversion information indicative of results of an appliance of a sequence of bit rate conversion schemes on the sequence of media signals.

8. (Currently Amended) The method of claim 7 further comprising the steps of:

transmitting the bit rate conversion information and the media signals sequence until there is a need to convert the bit rate of the media signals sequence by applying a first bit rate conversion scheme out of the sequence of bit rate conversion schemes; and

applying a ~~the~~ first bit rate conversion scheme, and discarding bit rate conversion information relating to the first bit rate conversion information to provide modified bit rate conversion information.

9. (Currently Amended) The method of claim ~~1~~2 wherein the media signals are selected from a group consisting of:

signals representative of visual information;

compressed signals representative of visual information;

MPEG compliant signals;

signals representative of audio information;

compressed signals representative of audio information;

information signals associated with signals representative of visual information;

information signals associated with compressed signals representative of visual information;

information signals associated with MPEG compliant signals;

information signals associated with signals representative of audio information;

information signals associated with compressed signals representative of audio information; and

sequences of media signals.

10. (Cancelled)

11. (Currently Amended) In a distribution center configured to transmit a plurality of media streams to a plurality of receivers that determine whether to apply bit rate conversion techniques , a method for generating and transmitting bit rate conversion information, the method comprising:

receiving at least one media stream, the at least one media stream is to be transmitted over a communication channel;

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applying at least one bit rate conversion scheme on the at least one media stream;

analyzing the results of the appliance of the at least one bit rate conversion scheme to provide bit rate conversion information to be transmitted to the plurality of receivers.

12. (Currently Amended) In a distribution center configured to transmit a plurality of media streams, a method for generating and transmitting bit rate conversion information, the method comprising: receiving at least one media stream, the at least one media stream is to be transmitted over a communication channel; applying at least one bit rate conversion scheme on the at least one media stream; analyzing the results of the appliance of the at least one bit rate conversion scheme to provide bit rate conversion information; and ~~The method of claim 11 further comprising a step of~~ transmitting at least a portion of the bit rate conversion information over the communication channel.

13. (Original) The method of claim 12 wherein the step of transmitting at least a portion of the bit rate conversion information is preceded by a step of multiplexing the at least portion of the bit rate conversion information with the at least one media stream.

14. (Currently Amended) The method of claim 12 wherein the bit rate conversion information indicates (a) ~~the~~ at least ~~one~~ two bit rate conversion scheme_s_ applied on the at least one media stream, and (b) at least ~~one~~two amount_s_ of bit rate conversion_s_ resulting from the appliance of the at least ~~one~~two bit rate conversion scheme.

15. (Original) The method of claim 14 wherein the bit rate conversion further indicates at least one quality loss resulting from the appliance of the at least one bit rate conversion scheme.

16. (Currently Amended) The method of claim 11 wherein the bit rate conversion schemes is ~~are~~ selected from a ~~the~~ group consisting of:

removing filler packets;

removing filler frames;

removing stuffing bits;

selectively scaling DCT coefficients to zero;

selectively setting DCT coefficients to zero;

discarding data used to represent selected media frames;

discarding data used to represent selected media frames and generating repeat information in the bit stream such that a decoder can repeat the dropped frames;

re-quantizing quantized DCT coefficients;

extracting and changing the quantization scale factors;

decode and encode at different bit rates; and

changing the resolution of a video image.

17. (Currently Amended) The method of claim 11 wherein the steps of applying and analyzing are repeated to produce bit rate conversion information indicative of results of an appliance of a sequence of bit rate conversion schemes on the at least one media streams.

18. (Currently Amended) In a distribution center configured to transmit a plurality of media streams, a method for generating and transmitting bit rate conversion information, the method comprising: receiving at least one media stream, the at least one media stream is to be transmitted over a communication channel; applying at least one bit rate conversion scheme on the at least one media stream; analyzing the results of the appliance of the at least one bit rate conversion scheme to provide bit rate conversion information; wherein the steps of applying and analyzing are repeated to produce bit rate conversion information indicative of results of an appliance of a sequence of bit rate conversion schemes on the at least one media stream; The method of claim 17 further comprising the steps of: wherein the method further comprises

transmitting the bit rate conversion information and the at least one media stream until there is a need to convert the bit rate of a media stream out of the at least one media streams by applying a first bit rate conversion scheme out of the sequence of bit rate conversion schemes; and

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applying the first bit rate conversion scheme, and discarding bit rate conversion information relating to a the first bit rate conversion information to provide modified bit rate conversion information.

19. (Original) The method of claim 11 wherein each media stream includes signals selected from a group consisting of:

signals representative of visual information;

compressed signals representative of visual information;

MPEG compliant signals;

signals representative of audio information;

compressed signals representative of audio information;

information signals associated with signals representative of visual information;

information signals associated with compressed signals representative of visual information;

information signals associated with MPEG compliant signals;

information signals associated with signals representative of audio information;

information signals associated with compressed signals representative of audio information; and

sequences of media signals.

20. (Cancelled)

21. (Currently Amended) A method for modifying a bit rate of a sequence of media signals such that the bit rate of the sequence of media signals does not exceed an available bandwidth of a communication channel, the method comprising the steps of:

receiving, at a local distribution center, the sequence of media signals sequence, bandwidth information and bit rate conversion information;

determining, by a local distribution center, whether to convert the bit rate of the sequence of media signals in view of bandwidth information and the bit rate conversion information; and

converting the bit rate of the sequence of media signals in response

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to the determination.

22. (Original) The method of claim 21 wherein the media signals comprising of at least two sequences of media signals, whereas each sequence of media signals is associated with a bit rate conversion information.

23. (Currently Amended) The method of claim 22 wherein each bit rate converted sequence of ~~compressed~~ media signals is representative of at least a portion of a program.

24. (Original) The method of claim 23 further comprising a step of selecting at least one of the at least two sequences to be provided to the channel and wherein converting the media signals in view of the selection.

25. (Currently Amended) The method of claim 24 wherein the step of ~~reception~~ receiving is preceded by a step of multiplexing the at least two sequences of ~~data~~ media signals.

26. (Currently Amended) ~~The method of claim 25~~ A method for modifying a bit rate of a sequence of media signals such that the bit rate of the sequence of media signals does not exceed an available bandwidth of a communication channel, the method comprising the steps of:

receiving the sequence of media signals , bandwidth information and bit rate conversion information;

determining whether to convert the bit rate of the sequence of media signals in view of bandwidth information and the bit rate conversion information;
converting the bit rate of the sequence of media signals in response to the determination;

wherein the media signals comprising of at least two sequences of media signals, whereas each sequence of media signals is associated with a bit rate conversion information;

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wherein each bit rate converted sequence of media signals is representative of at least a portion of a program;

wherein the method further comprising a step of selecting at least one of the at least two sequences to be provided to the channel and wherein converting the media signals in view of the selection;

wherein the step of receiving is preceded by a step of multiplexing the at least two sequences of media signals; and

wherein the step of multiplexing is preceded by a step of generating bit rate conversion information.

27. (Currently Amended) The method of claim 21 wherein the bit rate conversion information being indicative of a bit rate conversion after performing at least of the following bit conversion step selected from ~~the~~a group consisting of:

removing filler packets;

removing filler frames;

removing stuffing bits;

selectively scaling DCT coefficients to zero;

selectively setting DCT coefficients to zero;

discarding data used to represent selected media frames;

discarding data used to represent selected media frames and generating repeat information in the bit stream such that a decoder can repeat the dropped frames;

re-quantizing quantized DCT coefficients;

extracting and changing the quantization scale factors;

decode and encode at different bit rates; and

changing the resolution of a video image.

28. (Cancelled)

29. (Currently Amended) ~~The method of claim 28~~ A method for modifying a bit rate of a sequence of media signals such that the bit rate of the sequence of media signals does not

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exceed an available bandwidth of a communication channel, the method comprising the steps of:

receiving the sequence of media signals , bandwidth information and bit rate conversion information;

determining whether to convert the bit rate of the sequence of media signals in view of bandwidth information and the bit rate conversion information; and

converting the bit rate of the sequence of media signals in response to the determination; wherein the bit rate conversion information is multiplexed with the media signals;

wherein the bit rate conversion information is generated by a central analyzer. ~

30. (Currently Amended) The method of claim 2~~8~~1 wherein each bit rate converted sequence of ~~compressed~~ ~~digital~~ media signals represents a program.

31. (Original) The method of claim 21 wherein the bit rate conversion information further indicates of a quality degradation resulting from the appliance of a bit conversion scheme on the media signals; and the step of converting the media signals in further based upon the quality degradation.

32. (Original) The method of claim 21 wherein the media signals are associated with priority criteria, and wherein the step of converting the media signals is further based upon a priority associated with the media signals.

33. (Original) The method of claim 21 wherein the media signals are MPEG compliant signals.

34. (Original) The method of claim 33 wherein the media signals are arranged in MPEG compliant transport packets.

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35. (Currently Amended) ~~The method of claim 34~~ A method for modifying a bit rate of a sequence of media signals such that the bit rate of the sequence of media signals does not exceed an available bandwidth of a communication channel, the method comprising the steps of:

      receiving the sequence of media signals , bandwidth information and bit rate conversion information;

      determining whether to convert the bit rate of the sequence of media signals in view of bandwidth information and the bit rate conversion information; and

      converting the bit wherein the media signals are MPEG compliant signals;

      wherein the media signals are arranged in MPEG compliant transport packets;

      wherein the bit rate conversion information is embedded within the headers of the transport packets.

36. (Cancelled)

37. (Cancelled)

38. (Currently Amended) An apparatus for generating and transmitting bit rate conversion information, the apparatus comprising:

      at least one bit rate converter for receiving a sequence of media signals to be transmitted over a communication channel, and for applying at least one bit rate conversion scheme on the sequence of media signals to provide a bit rate converted sequence of media signals;

      at least one bit rate conversion analyzer, coupled to the at least one bit rate converters, for receiving and analyzing the bit rate converted sequence of media signals and providing bit rate conversion information.

39. (Original) The apparatus of claim 38 further comprising a transmitter, coupled between the at least one bit rate conversion analyzer and the communication channel, for receiving and transmitting over the communication channel at least a portion of the bit rate conversion information.

40. (Currently Amended) The apparatus of claim 38 further comprising a multiplexer, coupled between the at least one bit rate conversion analyzer and the communication channel, the multiplexer is configured to receives and multiplexes the sequence of media signals and at least a portion of the bit rate conversion information.

41. (Original) The apparatus of claim 38 wherein the bit rate conversion information indicates (a) the at least one bit rate conversion scheme applied on the sequence of media signals, and (b) at least one amount of bit rate conversion resulting from the appliance of the at least one bit rate conversion scheme.

42. (Original) The apparatus of claim 41 wherein the bit rate conversion further indicates at least one quality loss resulting from the appliance of the at least one bit rate conversion scheme.

43. (Currently Amended) The apparatus of claim 38 wherein the bit rate conversion schemes are selected from thea group consisting of:

removing filler packets;

removing filler frames;

removing stuffing bits;

selectively scaling DCT coefficients to zero;

selectively setting DCT coefficients to zero;

discarding data used to represent selected media frames;

discarding data used to represent selected media frames and generating repeat information in the bit stream such that a decoder can repeat the dropped frames;

re-quantizing quantized DCT coefficients;

extracting and changing the quantization scale factors;

decode and encode at different bit rates; and

changing the resolution of a video image.

44. (Currently Amended) The apparatus of claim 38 wherein at least one pair of bit rate converter and bit rate conversion analyzer ~~are configured to~~ apply a sequence of bit rate conversion schemes on a sequence of media signals and ~~to~~ provide bit rate conversion information indicative of results of the appliance of the sequence of bit rate conversion schemes on the sequence of media signals.

45. (Original) The apparatus of claim 38 wherein the media signals selected from a group consisting of:

    signals representative of visual information;

    compressed signals representative of visual information;

    MPEG compliant signals;

    signals representative of audio information;

    compressed signals representative of audio information;

    information signals associated with signals representative of visual information;

    information signals associated with compressed signals representative of visual information;

    information signals associated with MPEG compliant signals;

    information signals associated with signals representative of audio information;

    information signals associated with compressed signals representative of audio information; and

    sequences of media signals.

46. (Original) The apparatus of claim 38 further configured to transmit the sequences of bit rate conversion information and the sequence of media signals to multiple receivers.

47. (Original) The apparatus of claim 46 being located within a central distribution center.

48. (Original) The apparatus of claim 46 wherein the receivers are local distribution centers.

49. (Currently Amended) An apparatus for generating and transmitting bit rate conversion information, the apparatus comprising:

at least one bit rate converter for receiving at least one stream of media signals to be transmitted over a communication channel, and for applying at least one bit rate conversion scheme on the at least one media stream to provide at least one bit rate converted stream of media signal;

at least one bit rate conversion analyzer, coupled to the at least one bit rate converters, for receiving and analyzing the at least one bit rate converted stream of media streams signals and for providing bit rate conversion information.

50. (Original) The apparatus of claim 49 further comprising a transmitter, coupled between the at least one bit rate conversion analyzer and the communication channel, for receiving and transmitting over the communication channel at least a portion of the bit rate conversion information.

51. (Currently Amended) The apparatus of claim 49 further comprising a multiplexer, coupled between the at least one bit rate conversion analyzer and the communication channel, the multiplexer is configured to receives and multiplexes the at least one media stream and at least a portion of the bit rate conversion information.

52. (Original) The apparatus of claim 49 wherein the bit rate conversion information indicates (a) the at least one bit rate conversion scheme applied on the at least one media stream, and (b) at least one amount of bit rate conversion resulting from the appliance of the at least one bit rate conversion scheme.

53. (Original) The apparatus of claim 52 wherein the bit rate conversion further indicates at least one quality loss resulting from the appliance of the at least one bit rate conversion scheme.

54. (Currently Amended) The apparatus of claim 49 wherein the bit rate conversion schemes are selected from a the group consisting of:

removing filler packets;
removing filler frames;

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removing stuffing bits;

selectively scaling DCT coefficients to zero;

selectively setting DCT coefficients to zero;

discarding data used to represent selected media frames;

discarding data used to represent selected media frames and generating repeat information in the bit stream such that a decoder can repeat the dropped frames;

re-quantizing quantized DCT coefficients;

extracting and changing the quantization scale factors;

decode and encode at different bit rates; and

changing the resolution of a video image.

55. (Currently Amended) The apparatus of claim 49 wherein at least one pair of bit rate converter and bit rate conversion analyzer ~~are configured to~~ apply a sequence of bit rate conversion schemes on a at least one media stream and ~~to~~ provide bit rate conversion information indicative of results of the appliance of the sequence of bit rate conversion schemes on the at least one media stream.

56. (Original) The apparatus of claim 49 wherein the media streams comprising at least one signal selected from a group consisting of:

signals representative of visual information;

compressed signals representative of visual information;

MPEG compliant signals;

signals representative of audio information;

compressed signals representative of audio information;

information signals associated with signals representative of visual information;

information signals associated with compressed signals representative of visual information;

information signals associated with MPEG compliant signals;

information signals associated with signals representative of audio information;

information signals associated with compressed signals representative of audio information; and

sequences of media signals.

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57. (Original) The apparatus of claim 49 further configured to transmit the sequences of bit rate conversion information and the sequence of media signals to multiple receivers.

58. (Original) The apparatus of claim 49 being located within a central distribution center.

59. (Original) The apparatus of claim 57 wherein the receivers are local distribution centers.

60. (Currently Amended) An apparatus for modifying a bit rate of a sequence of media signals such that the bit rate of the sequence of media signals does not exceed an available bandwidth of a communication channel, the apparatus comprising:

a controller, coupled to ~~the~~a bit converter, for receiving bit rate conversion information and bandwidth information and for determining whether to convert the bit rate of the sequence of media signals in response to the bandwidth information and the bit rate conversion information; wherein the bit rate conversion information is provided from a central analyzer to multiple controllers; and

a bit rate converter, coupled to the controller, for receiving the sequence of media signals, and for converting the bit rate of the sequence of media signals, in response to the determination.

61. (Original) The apparatus of claim 60 wherein the media signals sequence comprising of at least two sequences of media signals, whereas each sequence of the at least two media signals sequences is associated with a bit rate conversion information.

62. (Original) The apparatus of claim 60 wherein each of the at least two sequences of media signals is representative of at least a portion of a program.

63. (Currently Amended) The apparatus of claim 62 ~~further configured to~~ wherein the apparatus selects at least one of the at least two sequences to be provided to the communication channel.

64. (Original) The apparatus of claim 62 further comprising a multiplexer, coupled between the communication channel and the bit rate converter, for multiplexing the at least two sequences of data media.

65. (Currently Amended) The apparatus of claim 60 wherein the bit rate conversion information being indicative of a bit rate conversion after performing at least of the following bit conversion step selected from ~~the~~a group consisting of:

 removing filler packets;

 removing filler frames;

 removing stuffing bits;

 selectively scaling DCT coefficients to zero;

 selectively setting DCT coefficients to zero;

 discarding data used to represent selected media frames;

 discarding data used to represent selected media frames and generating repeat information in the bit stream such that a decoder can repeat the dropped frames;

 re-quantizing quantized DCT coefficients;

 extracting and changing the quantization scale factors;

 decode and encode at different bit rates; and

 changing the resolution of a video image.

66. (Cancelled)

67. (Currently Amended) The apparatus of claim 6~~6~~0 wherein the bit rate conversion information is multiplexed with the media signals.

68. (Currently Amended) The apparatus of claim 6~~6~~0 wherein ~~the sequence of~~ media signals are associated with priority criteria, and wherein the step of converting the media signals is further based upon a priority associated with the media signals.

69. (Original) The apparatus of claim 60 wherein the media signals are MPEG compliant signals.

70. (Original) The apparatus of claim 60 wherein the media signals are arranged in MPEG compliant transport packets.

71. (Currently Amended) <u>An apparatus for modifying a bit rate of a sequence of media signals such that the bit rate of the sequence of media signals does not exceed an available bandwidth of a communication channel, the apparatus comprising:</u>

<u>a controller, coupled to a bit converter, for receiving bit rate conversion information and bandwidth information and for determining whether to convert the bit rate of the sequence of media signals in response to the bandwidth information and the bit rate conversion information; and a bit rate converter, coupled to the controller, for receiving the sequence of media signals, and for converting the bit rate of the sequence of media signals, in response to the determination; wherein the media signals are arranged in MPEG compliant transport packets; and</u> ~~The apparatus of claim 70~~ wherein the bit rate conversion information is embedded within the headers of the transport packets.

72. (Currently Amended) <u>An apparatus for modifying a bit rate of a sequence of media signals such that the bit rate of the sequence of media signals does not exceed an available bandwidth of a communication channel, the apparatus comprising:</u>

<u>a controller, coupled to a bit converter, for receiving bit rate conversion information and bandwidth information and for determining whether to convert the bit rate of the sequence of media signals in response to the bandwidth information and the bit rate conversion information;</u>

<u>a bit rate converter, coupled to the controller, for receiving the sequence of media signals, and for converting the bit rate of the sequence of media signals, in response to the determination;</u> ~~The apparatus of claim 60 further configured to~~<u>wherein the apparatus modifies</u> ~~modify~~ bit rate conversion information, to reflect bit rate conversion schemes that were applied by the bit rate converter.

73. (Original) The apparatus of claim 72 wherein the bit rate conversion information being indicative of results of an appliance of sequence of bit rate conversion schemes on the sequence of media signals.